The Meaning of "The Economics and Ethics of Alternative Cadaveric Organ Procurement Policies"

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Following up on proposals by several others,[1] Blair and Kaserman have thoroughly examined the current system of kidney procurement in *The Economics and Ethics of Alternative Cadaveric Organ Procurement Policies*. They advocate an alternative which, they argue, would lead to a greater yield of kidneys for transplant. They find that a market system for obtaining consent for kidney donation would be the best means of alleviating the shortage.

The authors carefully define the boundaries of the issue they are confronting. They speak of kidney donation only from cadavers (non-living donors), and focus their arguments on the benefits to be derived for end-stage renal disease (dialysis) patients. They claim that other populations of waiting patients, also in need of vital organs, would benefit by virtue of a system which will produce more multiple organ donors.

In this comment, I critique Blair and Kaserman's argument by clarifying the limits of their theoretical framework, and by trying to shed some light on the importance of what they leave out—most importantly issues of organ allocation. To do this, I will attempt to indicate what information is missing, obtainable, and usable in the final debate over the public policy choice concerning non-living organ donors. I will ask to what extent the shortage is due to a lack of consent and to what extent it is due to other problems in the altruistic system. I will try to explain why the current altruistic system developed and why there might be significant resistance to the market alternative. A consideration of these issues brings me to the conclusion that we need a much better understanding of the organ donor shortage before we begin the final debate on the choice of a procurement system.

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1. *See* Cohen, *Increasing the Supply of Transplant Organs: The Virtues of a Futures Market*, 58 GEO. WASH. L. REV. 1 (1989); Hansmann, *The Economics and Ethics of Markets for Human Organs*, 14 J. HEALTH POL., POL'Y & LAW 57 (1989); Schwindt & Vining, *Proposal for a Future Delivery Market for Transplant Organs*, 11 J. HEALTH POL., POL'Y & LAW 483 (1986).

I. Supply and Demand: A Medical Perspective

Blair and Kaserman support a system change aimed at increasing the number of donors by using monetary transfer to motivate consent for non-living organ donation. With such an approach, they argue, more donors will materialize, and the cost of buying consent for organ donation will be reasonable as market forces are called into play. The authors further emphasize the role of professional hegemony in creating inefficiencies in the current system. Many of the inefficiencies of the current system appear to be related to factors such as lack of organization within hospitals and disinterest among professional parties who should be involved with donor identification. In addition, problems of the current system may be related to inability or disinterest of non-professional parties to participate, or to organize themselves to participate in the system debate, as well as professional hegemony.

It is important to distinguish two aspects of the shortage which are often confused. The first is the question of how many potential non-living organ donors, not currently identified as such, could be identified and could provide organs? The second issue concerns the policy of allocation for organs once they are obtained.[2]

In considering the supply of organs, we should first ask: what is the extent of the organ donor shortage? To answer this question, it is necessary to understand the process of donor identification. Non-living organ donors must have had irreversible brain injury such that two neurospecialists, with no professional conflict of interest in organ donation or transplant recipient benefit, can unambiguously state that there is no possibility of higher level brain function recovery. These prospective donors are typically located in hospitals, are on mechanical ventilation, and are of a neurological status such that if the respirator is disconnected, inability to breathe leads to immediate cardiac arrest.

The number of patients who are in this neurological state becomes the important variable in the equation needed to answer the question: how many potential donors are there? The reason to ask and answer the question is that Blair and Kaserman imply in their proposal that there would be a relatively unlimited number of these cases identified under a market system of compensated consent. Such a large number would then likely cause the price to stabilize at a reasonable level, if not end the shortage. This claim about numbers of donors is unrealistic.

It is a simple matter to determine the variables of the supply equation. They are the number of respirator-dependent brain-injury deaths that are available as organ donors, less those where there has been failure to ask for consent,

2. *See generally* Murray, *On the Human Body as Property: The Meaning of Embodiment, Markets, and the Meaning of Strangers*, 20 J. L. REFORM 1055, 1076 (1987) (distinguishing markets for production from markets for allocation).

failure to follow-up on procedures in donor identification, family refusal for personal reasons (religious, superstitious, lack of a clear will of the deceased), family obstruction of a living will (a potentially serious time-consuming deterrent), or medical unsuitability. It is my belief that as thorough studies to obtain this type of information are reported, it will emerge that the former factor, failure to request, will be shown to be the most important reason for not realizing more donors.[3]

This important part of the shortage problem may not necessarily be affected by the type of market system change proposed. Hospitals fail to identify many potential donors because they lack well-developed procedures and protocols, often owing to the fact that many facilities rarely encounter brain-death respirator-dependent potential donors. Often, education of pertinent staff has been ineffective, motivation is lacking, or logistics are a problem. It is these issues that organ procurement organizations (OPOs) understand, but better need to focus upon. While it would seem unthinkable to lose organs from a consenting individual in any system because of lack of motivation and cooperation within a hospital, there is little evidence to indicate that a market system could do anything substantial to correct this scenario.

Turning to the issue of demand, the authors' proposal raises potentially disturbing questions. How would organ value be determined under their system? Are we now entering the territory of rules of allocation when we speak of individual donor-recipient transactions? This raises a larger ethical question: whether a professional should have to consider what an individual recipient is willing to pay before performing a transplant operation. A system that favored one recipient over another on the basis of ability to pay would create the opportunity to manipulate the system for organs of better quality, from younger donors, better tissue match, and so on. The proposal fails to understand that there are established genetic and medical criteria which operate to allocate organs in the interest of long-term success.

Another question is whether, in establishing the worth of an organ by mechanisms that attempt to measure patient desires, the choice is influenced by psychological desperation, dissatisfaction with current therapy, the amount of available wealth, and willingness to part with it. For instance, there are very different psychological forces at work in a patient on dialysis who can live normally, as opposed to the end-stage heart patient who will die in a matter of

3. *See* Nathan, Jarrell, Broznik, Kochik, Hamilton, Stuart, Ackroyd, & Nell, *Estimation and Characterization of the Potential Renal Organ Donor Pool in Pennsylvania*, 51 TRANSPLANTATION 142-149 (1991) [hereinafter Nathan]; Prottas & Batten, *Health Professionals and Hospital Administrators in Organ Procurement: Attitudes, Reservations, and Their Resolutions*, 78 AMER. J. PUB. HEALTH 642-645 (1988); Prottas, *Obtaining replacements: The organizational framework of organ procurement.* 8 J. HEALTH POL., POL'Y & LAW 235-250 (1983); Robertson, *Supply and Distribution of Hearts for Transplantation: Legal, Ethical, and Policy Issues*, 75 CIRCULATION 77-87 (1987).

months without a transplant. Therefore, market theorists must detail what sorts of medical and psychosocial determinants will operate in the market system. If large insurers or government agencies, instead of individuals, are to participate in a market system, the result may be very different from that predicted by simple economic models predicated on atomistic competition. While Blair and Kaserman's market analysis is provocative, a full and reasoned debate over organ procurement must go beyond basic supply and demand to discuss the practical policy decisions which are intertwined with the issue of allocation.

II. Misleading Images

Turning to the elements of the supply equation, I will address the misleading assumptions and imagery informing the Blair and Kaserman article. The first assumption is that donor organs are routinely wasted because of the failure of the altruistic system of consent. If we exclude those cases where failure to obtain consent can be traced to people with strongly held negative beliefs regarding organ donation (a group unlikely to change their beliefs in any system), we are left with the focus on those cases where there is an ambivalent will of the deceased. Blair and Kaserman cite articles suggesting that only a small percentage (<20%) of potential donors are realized. This figure is based on a number of estimates and is exaggerated due to a lack of methodology accurately defining the correct denominator for the ratio, based on respirator dependency and medical suitability. More recent studies have shown that the current altruistic system yields about 50-65% of the respirator-dependent potential donors.[4]

High quality information is necessary to understand why, though under the current system the number of kidneys transplanted increased from 4900 in 1981 to 9000 in 1987, the increase has not been sustained. More recent data for 1990 shows 8484 non-living donor kidneys transplanted.[5] Whether this plateau is due to a failure or limitation of altruism in the current system is unclear. What is clear is that the reasons for the difference in potential versus achieved donations can be determined. The need to obtain accurate information to define the real nature of the acquisition problem is still required for the final debate over the merits of the market system.

Adding to the organ shortage imagery is the often repeated allusion to young highway accident victims as donors.[6] This gives the impression that the

4. *See* Balk, *Etude Sur Les Donneurs D'organes au Québec* 1-30 (Report to the Minister of Health of the Province of Quebec, 1991); Nathan, *supra* note 3. *But see* Prottas, *supra* note 3 (finding this figure to be as low as 9%).

5. Nathan, TRANSPLANT NEWS, Feb. 27, 1991, at 1.

6. *See, e.g.*, Cohen, *supra* note 1, at 1-51 (arguing that "a market might function tolerably well when addressed to some discrete segment of the population, groups such as the Hell's Angels, made up of disaffected, violent young males who care little about their estates."); Hansmann, *supra* note 1, at 57-85

majority of highway accident casualties are potentially available for organ donation when in fact, they are not. While head-injury victims of some motor vehicle accidents do supply many organs, organs can be procured only from those who die in hospitals while on respirators. There are many other types of disease-associated brain injury which lead to suitable organ donor status; noteworthy are those due to cerebrovascular accidents.

Another type of imagery used is that of the languishing dialysis patient. Patients doing poorly on dialysis often do poorly when they receive kidney transplants. In reality, patients with end-stage renal disease have two adequate choices of therapy: dialysis or renal transplantation. Dialysis is more costly, and in many situations is quite inconvenient. Some patients have continuing medical problems and some would prefer to undergo a transplant. In addition, transplant patients often have medical, psychosocial, and rehabilitation problems which affect their dependence on the health care system. Graft loss does eventually occur in many patients. To cite one year graft survival as the outcome measure of success for transplantation seems a rather weak banner.[7] Patients who have unsuccessful renal transplants usually return to dialysis, as mortality rates are less than 5% per year, and many of the patients with failed transplants, but not all, choose to undergo a transplant again. If one corrects patient survival data for age and co-morbid processes, the technologies of dialysis and transplantation show no significant difference.[8] Thus, the preference of most dialysis patients for transplants is related to their perception of a better "quality of life." They are usually motivated by their own discontent on dialysis, by exposure to other transplant patients who have done well, and by information they receive from medical professionals.

III. Cartel Analysis

The authors frame the issue of therapy for end-stage kidney failure in terms of the traditionally perceived adversarial relationship of dialysis versus transplantation. The therapists for these two modes of treatment are dialysis physicians and transplant surgeons. Particularly in the U.S., these competing specialists have often been players in a fragmented treatment process. They have argued about the virtues of their own forms of therapy, rarely considering the

(proposing that private firms target "rowdy motorcycle gangs and buy up organ futures from their members for cash"). The language of such commentary seems rather cynical, and implies that certain segments of society are seen as providing organs for the benefit of other groups.

7. Blair & Kaserman, *The Economics and Ethics of Alternative Cadaveric Organ Procurement Policies*, 8 YALE J. ON REG. (1991).

8. Hutchinson, Thomas, Lemieux, & Harvey, *Prognostically Controlled Comparison of Dialysis and Renal Transplantation*, 26 KIDNEY INT'L 44-51 (1984).

more appropriate question of how to maximize the quantity and quality of life for a patient with end-stage renal failure.[9]

Patients are caught up by the tensions in this process. There are two gates through which renal transplant patients must travel. The first is receiving treatment by dialysis, and the second is placement on a waiting list for a transplant. In order to be considered for passage through the second gate, a referral by a dialysis physician has to be made. I would argue that this is a referral which every patient has the right to demand. It is thus very revealing to learn that while 110,000 patients are currently on dialysis in the U.S., only 25,000 are on transplant lists. Certainly some of the responsibility for this discrepancy lies with the unfortunate fragmentation between the dialysis and transplant professional communities. While the discrepancy may be partially attributed to patient disinterest or medical unsuitability for transplant, I believe that it is more significantly due to sequestration of patients by some dialysis physicians because of professional and financial self-interest.

With respect to the sequestration of patients, the authors have mistakenly implied conspiratorial behavior among transplant professionals. While this unfortunate situation can arise in less-integrated professional communities, ideally there should be very low incentives for sequestration even among dialysis professionals. Referring patients to transplant physicians should not substantially affect dialysis professionals' ability to bring many more patients into their care, since there is an even larger population of renal failure, non-dialyzed patients waiting for dialysis. It is likely that dialysis stations can be kept full.[10] To make the argument that there is a cartel operating to create a monopoly, reducing competition and industry output, is both to misunderstand the nature of the transplant enterprise, and to succumb to imagery awash in cynicism. Consider, for example, the heart transplant professional culture. While there may be a large number of heart transplant programs performing few heart transplants, this statistic is not necessarily related to the direct financial value the programs create for a transplant enterprise. More likely, additional heart transplant programs are created for the prestige and marketing benefits to other cardiac programs within an institution.

Blair and Kaserman contend that OPOs benefit from a low number of donors because they enjoy a monopoly in the field. There are however, other, more benign interpretations for OPOs' spotty performance records. Perhaps, if they are not doing their jobs well, it is because they are underfunded or their personnel undertrained. Inadequate education and implementation of donor

9. Guttmann, *Facing Organ Allocation Issues: An Insider's View From the New World*, in ETHICS, JUSTICE AND COMMERCE IN ORGAN REPLACEMENT THERAPY 412-20 (W. Land & J.B. Dossetor eds.).

10. We should also not forget that thousands of patients are awaiting other types of vital organs and do not have alternative therapy choices. Because these transplant programs are not competing with other forms of chronic therapy, the gates to access are not yet established and are likely to be defined differently.

identification protocols by OPOs within hospitals may result in the significant problem of failure to ask for consent.[11] An analysis that focuses on monopolistic design in the altruistic system may underestimate the importance of these practical factors in the day-to-day operating of the OPOs.

The authors also contend that a market system will be less susceptible than an altruistic system to black market problems. They argue that having no price on organs under the current altruistic system results in an undersupply. The system thus potentially creates a black market or influences the inclination of patients to make "donations" to transplant centers in order to jump the queue. Most concerned professionals abhor the isolated incidents of this manipulative behavior. However, the creation of a legitimate market will not eliminate the possibility for, or the troubling qualities of, such transactions, but will only change the locus of system manipulation.

IV. Commodifying Consent

Blair and Kaserman discount the ugliness of a system that has brokers and agents of patients, and the problems that could arise when living donors bid for organs or futures contracts for organs. The market system is intended to recruit future organ donors as well as to compensate families of uncommitted potential brain-death donors. The belief is that this system will not interfere with the situation of becoming a donor, will not affect the determination of irreversible brain damage, and will theoretically initiate more easily the complex process of donor identification.

The market proposal, then, really shifts the initiating cause of the process from the family or attending physician, in the altruistic instance, to the market system itself. But initiation by the market is little different from initiation by an uncompensated voluntarily signed living will, except that there is a greater likelihood that a living will, currently untracked, could go unnoticed (or disregarded if in conflict with next-of-kin attitudes). Where there is no prior consent, market forces may create added incentives for third party procurement, but ultimately the scenario would be the same as under the altruistic system, because procurement will still require next-of-kin consent in an environment of familial grief.

The market system relies on monetary payment to obtain consent in these situations. However, offers of payment may offend and can change attitudes about consent. The delicacy of attitudes is illustrated by a recent report from Argentina. There, the number of donor referrals to their OPOs fell dramatically when the media provided unsubstantiated reports that children were being

11. Robertson, *supra* note 3, at 77-87.

abducted for the purpose of obtaining organs, some said to return with a "little scar in the loin," implying that a kidney had been removed.[12]

The focal points of consent are not different under the two systems, but what is essentially different will upset many. The act of donation, rather than the organ, is commodified. While cultures and individuals differ in their view of the reification of altruistic acts, the psychological benefits derived from the act of consent for organ donation ought not be thought valueless. Thus the "zero" price is used in a distorted way to bolster a narrow economic argument about a matter that has many other dimensions. In fact, public attitudes do not appear to support a system change.[13]

V. Logistical Questions

The authors leave open many important questions about how their proposed system would work logistically. What are the contracting-in and contracting-out mechanisms, the identification and tracking mechanisms, and the default mechanisms for organ donors? Since promises of future delivery would be sold and could be rebought, could there be trading in the system such that someone could sell when the market was thin and command a price greater than that when the market was more liquid, thus deriving a profit from entering and exiting before death? Could one do this multiple times? That is to say, could one become a trader of consent contracts of one's vital organs? Could derivative instruments, such as rights on these contracts, be developed? What about contract cancellation? Could the mechanics of family meandering possibly tie up the proceedings for long a enough time such that the organs would not be usable?

The functioning of the system would also depend upon the answers to empirical questions. If such a market system were introduced, how long might it take for current contract sellers to arrive at the donor state? Are there estimates of the cost of establishing and implementing such a system?

Other interesting questions arise when considering the futures contract, which is a market instrument suggested by other commentators. Is it for all the organs or can one sell a contract on kidneys and liver, for example, but not heart, lungs and pancreas? If, during the life of the contractor, a disease develops which makes one or more but not all organs unusable, is repayment required for the inability to provide a specific organ? If not, would purchasers be allowed to create contractual obligations on the part of the future donor to

12. *See* Cantarovich, *Sectarianism, Uncertainty and Fear: Mechanisms that may Reverse Attitudes Toward Organ Donation*, 21 TRANSPLANTATION PROCEEDINGS 1409-10 (1989).

13. *See* Manninen & Evans, *Public Attitude and Behavior Regarding Organ Donation*, 253 J. AM. MED. A. 3111-15 (1985); Prottas, *Encouraging Altruism: Public Attitudes and Behavior Regarding Organ Donation*, 61 MILLBANK MEMORIAL FUND Q./HEALTH AND SOCIETY 278-306 (1983).

refrain from activities that likely damage the organs? In contrast, in the altruistic system, the living will signer is not tracked, and dealt with at virtually no cost at the time of actual donation.

Whether compensation for future donation would be acceptable to the public and consequently result in more sign-ups and more donors needs to be further explored. The vast majority of individuals will never need a transplant, nor will be medically definable as an organ donor. Determining attitudes towards the consent act needs to and can be determined. Perhaps in the process, we will discover why the altruism and "gift of life" metaphors have been so strong. While these needs for information should not deter the theoretical considerations of the proposal or the merits of arguments for or against compensation, one ultimately must deal in specifics as well as theory if we are to take the proposal seriously.

Conclusion

For those of us engaged in the field of organ transplantation, patients are constant reminders of the donor shortage. We have long waiting lists of those who need hearts, lungs and livers. These patients will die in an extraordinarily unpleasant manner unless a vital organ for transplantation is obtained. The situation is somewhat less dramatic for the thousands of patients with kidney failure. The alternative treatment by dialysis allows a reasonable rehabilitation and quality of life for those who have not yet been allocated a kidney or for those who choose not to have a kidney transplant.

Waiting lists demonstrate the oppressive reality of the donor shortage problem. Many more patients are awaiting transplants than there are organs available. There is a strong belief that there are many more usable organs not being obtained, and a strong desire to improve and make substantial changes in the current system. I have argued that the strength of these desires has not yet been met by equally strong arguments for switching from an altruistic to a market system.

The proposal to change from altruistic consent for organ donation to a market-based valuation system represents a radical departure that offers only thin assurances of improvement. It is radical since it exchanges important symbols—we are being asked to reify and to sell consent, an act not previously considered a commodity. The altruistic act of consent for donation exists in the context of a complex medical field. Transplantation, with all of its life-prolonging and dramatic aspects, consumes considerable resources per individual treated and treads on the culturally sensitive ground of beliefs about body and death.

Switching to a market system offers little hope of mitigating the difficulties of the process. The risk that a mercantile transaction will further dehumanize

the event, whether action was taken in the past or consent obtained in the present, is a subject that deserves reflection. The contention that the futures and spot market contract for the consent act will produce more donor organs should not be thought resolved until more essential information is elaborated through a proper research agenda. Questions pertaining to allocation, or the demand side of the equation, need be addressed for any theory of an organ donor market to be fully realizable.

Until it can address these problematic areas, Blair and Kaserman's proposal for a cadaveric organ market, helpful though it may be in advancing debate, remains in the realm of an interesting one-dimensional speculation. The realities with which the market system would have to contend may overwhelm the benefits identified by its proponents.